

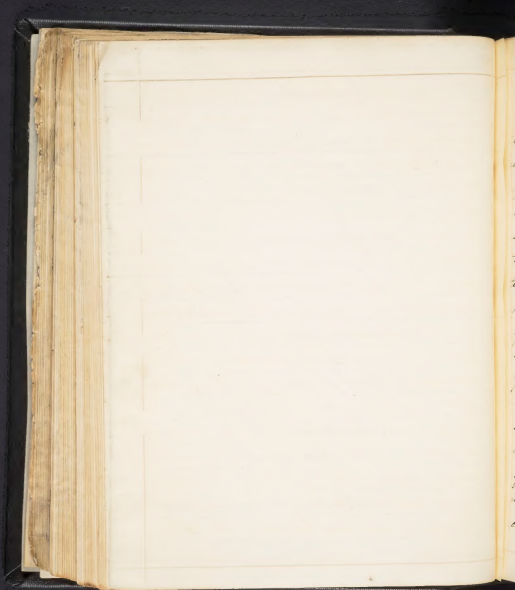
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Ms. C.

A dissertation
on
Cynanche Trachealis
for
the Degree
of
Doctor of medicine
in
the University
of
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by
Lewis Drake
of
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In compliance with the laws of this University which require the candidate for medical honours to present to the faculty for examination a thesis on some medical subject, I have selected *Cynanche Tonsillaris* for the theme of the following brief essay. My motive for making this choice is not that I have any thing new to offer in addition to the excellent treatises which have been published on this distressing malady, but on the contrary because I consider this the best and most effectual means of acquiring a correct and thorough knowledge of a disease which too often baffles not only the young practitioner, but even the skill of the most experienced. Another reason for my making this selection is that since the commencement of my medical studies I have had the opportunity of witnessing several cases of croup, one of which I will take the liberty of detailing in another place being calculated I think to confirm certain views entertained of the pathology



of the disease. Croup, like many other diseases of notoriety at the present day, appears to have been little known, or at least very obscurely and indefinitely described by the ancient writers on medicine. Mention is indeed made by several of them of a most violent and fatal species of angina which was unaccompanied by swelling and redness of the fauces, but further than this it was not defined. The first regular treatise on croup was published in 1749 by Martin Ghisli a respectable physician of Cremona in Italy; about the same time a tolerably accurate account of it was published by Jⁿ Haor in the Philosophical Transactions at London which is mentioned by Dr Chapman in the Journal of Medical and Physical sciences. Another essay was subsequently published by the celebrated Professor Home of Edinburgh in 1765. Croup being very prevalent at Leith the seaport about a mile distant from Edinburgh procured the Doctor considerable experience in this disease.



and furnished materials for his work. In 1778 a more extensive and detailed account of this disease was published by Frederick Michaelis of Göttingen in Germany entitled "De angina polyposa sive membranacea" in which he relates the history and treatment of a number of cases that came under his notice. But for the most accurate and scientific dissertation on Croup we are indebted to Dr. John Hayne who from his residence at Leith possessed the same opportunities in practice as his predecessor Home and who has added a minute detail of the morbid appearances of several dyspnoeas which came under his inspection. In this country the distinguished Rush, in the first volume of the Medical observations and inquiries has left a dissertation on the Asthma infantum spasmodicum which appears to be identical with croup, though agreeably to the opinion of some it is a totally distinct disease and ought to come under a different class. Professor Chepman



in 1821 favoured us with his views on the subject in a paper entitled "Thoughts on the Pathology and treatment of Cynanche Trachealis" and published in one of the early numbers of the Journal of medical and Physical sciences. Besides these there are many other publications which it would be tedious and superfluous to enumerate. Names. By systematic writers Croup has obtained a great variety of appellations, each indicative of some constant symptom, as Suffocatio Stridula, Asthma Infantum, Asthma Infantum Spasmodicum, Cynanche Stridula, Angina Polyposa, Angina Epiglottica, Morbus Strangulatorius &c. It has been called Tracheitis by the modern pathologists, and this is perhaps the most eligible as it is short, and indicates the true seat and character of the disease. With regard to the Etymology of the vulgar term croup there is some difficulty. Cheyne says it is called Roup in Edinburgh, and he derives it from





in the form of convulsions is not more than a
manifestation of the more common & serious form; and
the latter a more continuation of its nature and
extension, which case requires a more
active is by no means a constant or inevitable conse-
quence. It is not more common in children than
in adults in which they most commonly occur in
children. This disease is sometimes preceded by the
symptoms of a cold, or a more or less severe
dysentery, or a cold and an unusually dry and
cough. The patient may continue in this state for
some time until a change of temperature or exposure
nature to some exciting cause gives rise to more alarm-
ing symptoms. But usually the onset is sudden
and violent - a cold or a more severe
monitory, or a more severe, or a more severe
and the patient is in immediate danger,
a severe case of the disease. But in children
the disease is not so common.



in handwriting when one is allowed to see so many
examples of the same. It is not, however, the same
in all the specimens are very nearly similar.
In attack generally comes on in the evening, whilst
the child is at play & subsides near at night with
a calm undisturbed slumber, & is so frequent
that the mother is to some unusual observation, and
soon it is not long before the generally unaccomplished
mother is obliged to attend to the child, and from
the mother's account, it is not long before the
after stages. The spells have commonly a frequent
in character, & the child is not of itself able to
resist the attack, & it is not a resistance re-
sulting from a more or less of a fit
of convulsions or vomiting, & the mother should observe
the nature of the convulsions compared to the child
in the state of the convulsions of a child. There is gen-
erally a more or less of a fit of the convulsions, &
some of the child is to be observed in the seizure



attention on inflammation. we have in addition the
inflammation in the trachea or neighbouring parts.
The bronchi, however, are not so much swollen, and
rarely swollen. The trachea is seldom inflamed or
inflammation immines. The voice at first is hoarse and
as a hoarse ringing sound resembling that of the
cough, in the latter stages it is nearly and often
quite suppressed. There is great difficulty in breath-
ing, when, as the disease advances, rapidly increases
in some that the mucous membrane and the
air are carried into violent action. The inspirations
are hurried and hurried accompanied with a hoarse
whispering sound resembling that occasioned by the
action of an air pump. The face which is at first
flushed becomes afterwards purple or livid, the eyes
are injected and the countenance expressive of
great anxiety and wretchedness. In addition to the
local symptoms, as in other phlegmasia, the contin-
guous becomes more or less considerably inflamed



the pain is increased, throbbing and acute, the surface
dry and parched, ^{with} much thirst, and the tongue is cov-
ered with a white fur; the mind often complains of
tremors is very restless and is constantly changing
its position but without relief; it cries and wails
and is excessively uneasy without suggesting any pos-
itive pain, the urine is scanty and turbid except
when a crisis is about to take place, it then becomes
fervid and more copious, the bowels are generally
constipated and sometimes distended. For remedial treat-
ment all the foregoing symptoms are aggravated
if respiration is more hurried and laborious, the
pulse becomes weak and fluttering, there is a ma-
lignant and even violent agitation of the heart, the
surface is cold and covered with a clammy sweat,
the eyes are glassy glazed, the mouth tinged with
pinkish white and glazed, at the same time the extrem-
ities are cold, the child becomes stupid and insen-
sible, delirium and some convulsive convulsions



and rapid death some times the cause. Such is the
rapidity of the progress that a child is often unconscious
before the mother has time to perceive the disease is upon
him. In some instances he is often carried off in the first
or second day of the disease. In some cases the disease
is more or less violent and the child is so much
relieved that he sometimes goes to sleep but this
relaxation is often deceptive and on a return he soon
relapses and is often carried off in a renewed and
sometimes more exacerbation. Causes. Children
from one to ten years of age are most subject to
this disease, and some writers have even gone so far
as to restrict it exclusively to the period between
infancy and puberty. That it however not un-
frequently occurs in adults is evident from the
testimony of most writers as well as from personal
observation. Professor Chapman in his lecture is in
the habit of relating two cases of this kind that came
under his charge; the patients who are now living



still subject to occasional recurrences; he has also seen it in Infants within the month. Some writers, among whom is Dr. Whist, makes the Oris of adults a distinct variety of the disease. The comparative immunity of adults from this disease is very peculiarly selected for attention which the membrane undergoes but an indolence of the membrane, & an association of tone, is also to be observed in which the membrane more capable of resisting with impunity the attacks of morbid action. Hence disability of the lachrymæ may be considered the increasing cause to cough. & Whist is of opinion that adults are as liable to it as children, but that they have the power of excoriation the lachrymæ secretion before it becomes a solid membrane. Some families are more subject to it than others, hence it is said to be hereditary, and this also probably depends on some peculiar conformation of the lachrymæ duct. Those who have experienced an attack of cough are liable



to a return on the circulation of the blood, and conse-
quently the inflammation is in a degree or partial resolu-
tion. By most of the Physicians at the Hospital this
cancer is now described to proceed from the heat of an
inflammation, although Dr G. Gregory says he does
hardly think it arises upon the principle that it does
in its worst form is explainable in terms common to all
inflammation. It is liable in some instances to be
cured by leeching. In most cases the swelling comes on
with and without much or no pain, in winter and
spring, in cold and dry, climates and in places on
the seacoast. It is supposed that children can be
separated at birth, and that there is some tendency to
its recurrence if the inflammation is cured, while at Edin-
burgh it is a rare occurrence. It is sometimes trans-
mitted or communicated with the venereal when the organ
is corroded by worms, or is more varied with neural
and insupportable matters. It may also be induced by
continued inflammation extending from the uterus



in *Dynastus* *Emilia* from the larvae and from
that taken in *Bombyliis* from *Emilia* and *Emilia*
larvae. — Diagnosis. The peculiar character given
renders it easily distinguishable from all other dis-
eases except *Dynastus* *Emilia* a variety of, and
which which under label has been uniformly con-
founded with the disease in question. The dis-
ease is, however, found in *Dynastus* *Emilia* there is
a peculiar sensation in the larva, a peculiar deg-
radation, swelling of the gills without the dis-
tinctness of the white symptoms and the dis-
tinctness of the disease in both are similar. *Emilia*
is not a disease, it is infectious. It is found to be
minute either as a disease of *Bombyliis* or as a
disease of *Emilia*, or a disease of the lungs
which is a disease of the lungs, and as it is of these
things in *Emilia* to distinguish the one from the
other *Emilia* *Emilia* and more *Emilia* the more
interesting diagnoses. The first is more *Emilia*



and even in the course of many accumulations of fibrin
and mucus in the lungs in tubercular an aneurism or
its sequel with cough, pulse rapid and skin red and
burning. In congestion there is still no much in-
creasing, pulse full regular and compressible, res-
piration increased, panting and laborious, becoming
most uneasy in the flaccid and flaccid one, but occa-
sionally in the weak and not extraordinary. -

Prognosis. Comp. of a proper and vigorous treat-
ment in its early stage may be encountered with
fully confident hopes of success, but when the same
symptoms are present and we are in the presence of con-
gestion of the lungs or an extension of inflammation
into the bronchial tubes we must be extremely cau-
tious in our prognosis. The elements of recovery or mod-
eration of the symptoms will govern in a measure our
predictions as to the nature of final termination.
Ease of mobility to the action of our remedies is deciding
in emphysema, over-inflation and exhalation



diminution of fever, moisture of the skin, regularity
of pulse, softness and moist breathing, loose and fluid
stool, subsiding are favourable signs; while debility,
anxiety, a rapid and exultant, great restlessness, cold
skin, weak pulse, nervous & the stupor, the fear
thrombosis, the natural situation and kind of it,
time and condition the time and the treatment
of the termination. Symptoms. The appearances
discovered in opening the trachea of children who have
succumbed to this disease vary according to the idio-
syncrasy of the subject, and the stage and treatment
of the disease. In some cases a moderate death of suffo-
cation, there are no evident marks of inflammation
within the membrane, the bronchi appear perfectly
natural. In others a more pronounced character of
inflammation is evident and unaccounted,
inflammation and the colour of the inner membrane,
adhesion of serous and mucous, mixed with mucus in the
cavity of the trachea, but one most remarkable



appearance, & in fact, a more or less gradual process, in which
the trachea grows from the larynx to the bronchiae and conse-
quently is limited to a mere tube for a considerable dis-
tance, & is when detached presents an appearance
of a canaliculus. In the tubular state of the air tube a
remembrance more or less perfect of the trachea.

Sometimes the inflammation is found to have extended
into the larynx and the membrane into the substance
of the lungs, at other times we have presented to us all
the evidences of a connection with the pleura, bronchiae
& trachea as in the following. Pathology.

By most writers croup has been divided into two species,
simple and in children, with regard to the pro-
pensity of this division however authors are much dis-
sent. Dr Cullen however considers it a comical cough
and intimates that the disease is named this name is
improperly designating, he calls it hoarseness (i.e. asthma in
infancy) & low inflammation of the trachea and comes under the
name of hoarseness & croup and according to Cullen not the



very strong, deep voice. — It is, in the opinion of some of the
persons in our ears, as much inferior to the voice of a
man. — The tone of the voice is so deep, low, & monotonous, as to be
in some respects like the voice of a woman. — The voice is
commonly of the disease, and this attended with some ex-
citation of the voice, as if from the lungs. In some of the
cases it is strong, the voice is deep, low, & the voice is
much greater, the voice is sharp and small. In some
extreme the voice is more like the voice of a child, is
high, full, the voice is low, but it is not very strong
and deep. — Propper's voice is the most low and deep,
and is the most in the disease of children, & is the most
low in this kind of the disease. — The voice
never is the same as the voice, but it is not the same in
the presence, & is not the same; the voice is deep
& low, but it may be the voice is not the same, & is
not the same in the disease. — The voice is not the same
in the presence of the disease, & is not the same in the
voice which he can speak, & which he can hear.



often arises from a first state of the stomach and liver
by a state of irritability in the child's system, or complicated
with the inflammatory process, and in such cases it is not easy to
or impossible, on that point, from some considerations
concludes, that no great degree of pathological im-
fluence is to be attached to the distinction. Professor
Chapman also in his lectures very clearly and carefully
distinguishes the two species, and believes that in all cases
when it attacks suddenly it is of the nature of
fever, and admits that the two are often complicated
and that the inflammatory is often a consequence of
the spasmodic, and concludes by saying that no impor-
tant practical distinction can be drawn from this dis-
tinction as modulation is the most common result of
fever and inflammation. On one occasion Dr.
Cheyne and other English writers depend on the
use of antispasmodics such as castor-oil, &c. &c. &c.
when the case is purely spasmodic. It is evident
from what has been said, that the prognosis is much



attended with regard to the preceding & this disease.
There is to surmount an opinion of the this point from
the evidence which I have not in my power to
withholding it would seem to be concerned with those who
consider it sometimes epidemic, more rare on particular
when now so frequently come under my own observation.
From which seem I think to justify this opinion. The
case to which I allude is a number of my patients from
city who have been in a number of cases, & still
continues to be. which is frequently subject to recur-
sions attacks of this disease. It however passes on
in a manner with little or no previous or subsequent
illness, and without any previous or subsequent disease.
The direct evidence of its nature is, however, not re-
solved in a manner which is not even now
followed by the most experienced, & more experienced, and the
other symptoms already detailed, and in a very minute
note after the first of them the "disease" and the
is a very good example of the "disease" and the



[illegible]



that such was the power of a standing posture, and a more
positive and direct action, as no more needed. Dr
Dewees and I agreed not to put the evidence, as given
in the even in question, but admit it was only in one
other place, and the other is "in the back, and even more than
in position is suddenly reduced as is indicated. It is
that of rather a continuous contraction of a group
than to episodic contraction. It is a summary of the
influence of workers I find I am justified in the conclu-
sion that energy in many instances consists in a violent
episodic contraction of the muscles of the galls and
there on the "upward" movement is the "at" - "in-
tention" of a single arm, and the "back" and
"upward" - "downward" sudden contraction are the
consequence of the "upward" contraction. These muscles
it that in these cases are sometimes it is, it is such
as are usual in the "at" - "in" of a group in similar
positions. It is, I think, that it is in the "at" - "in"
there can be no doubt that group is a majority, and



of, sometimes of red exudation, sometimes of white exudation
to and from the loose mucus of the mucous membrane,
and sometimes of a suppuration. Inflammation ends
in various ways. It may terminate in resolution, sup-
puration or the absorption of lymph. The most invari-
able of these is resolution, and when this takes place
the symptoms gradually disappear without any
infection. When inflammation is more violent the
action of the secretory system is excited and pus is se-
creted; this is a common termination owing to the peculiar
innervation of this tissue to the sympathetic plexus. The
next termination, viz. the absorption of lymph, rarely occurs
in the mucous tissues and is the effect of violent and
inordinate inflammation; it however occasionally
takes place in cases constituting the tubercular mem-
brane so frequently mentioned in this disease.

It would be difficult to reconcile the contrary opinions of
writers with regard to the membrane: some see no ef-
fect in it, others deny its existence, and others find it



specimen on the result of many post mortem examinations
seems consistent in its occurrence as to make
it almost a kind of certain termination of the disease.
The common opinion, into the nature was that it consisted
of a soft, gelatinous mass, the thinner parts being carried
off by exhalation, and the remainder being converted
into a solid by the passage of the air.

Micrasius has attempted to prove that it is of the nature
of mucus and differs from them in nothing else, but
its cylindrical form. It would be superfluous to
enter into a discussion of the merits of these several
hypotheses. It is now I believe universally conceded
that the adventitious membrane does occasionally
exist, that it is composed of coagulable lymph and
is the effect of the adhesive state of inflammation,
differing only in this respect, that the coagulable lymph
becomes detached from the secretory surface and
is taken into the trachea. It is generally large,
with less dense substance of more less density and is



never organized, no vessels having ever been discovered in it. It would to act sometimes like a valve in the lungs mechanically obstructing respiration...

Treatment.

With a view to the treatment of cough it has been divided by Dr Cullen into two stages, the incipient stage, or inflammation in which the membrane is not yet formed, and the complete or tubercular in which the membrane is completely formed. So long as Quercus has added a cold air, the forming stage in which the patient complains only of hoarseness, cough and the other symptoms of common catarrh. In the second or tubercular stage there is more or less irritation of the lining membrane of the trachea, and the primary effect of cold or other exciting causes. In the second or inflammatory of Cullen the irritation succeeded by inflammation which in it is not immediately arrestable with termination in suppuration and the excretion of pus. I am not quite sure that in



in its latent stage. Unfortunately for the patient the physician has rarely an opportunity of witnessing the disease in its forming stage and therefore I never justly reprove the too little to be neglected, and regard it with the same indifference is common elsewhere, indeed in many cases it would be difficult to determine whether more serious consequences were about to follow; it is however always preferable to be on the safe side, and to commence immediately on the appearance of the first hoarse ness or similar signs with our remedies & rubefacients. The indications are first to promote the secretion or the action of existing, then to stimulate action. second, to establish counter irritation on the external parts. The first indication is best answered by the expectorants, and of these the best is the decoction of scilla or lilies of the valley. When some prefer the sweet & inhalements in nasal form, I use at most the second indication the subsecretants such



as soon as convulsions, however, be checked & better
stimulating applications are employed. Some laxative
medicine is often requisite to open the bowels. The pa-
tient should be covered for undisturbed sleep, and
sedulously guard against exposure to cold. Our measures
in the second or inflammatory stage must be more bold
and decisive; for if it be suffered to advance further
our chance of affording relief will be greatly dimin-
ished. The indications here are to arrest the progress
of inflammation, to facilitate its termination
by resolution and moderate the symptomatic disor-
dinance. It is the practice of most Physicians to com-
mence with the exhibition of an emetic. The precise mo-
dus operandi by which emetics prove serviceable is not
well determined, and it was this circumstance that
led Dr. Hume to object to their employment: but wh-
en whatever theory their operation is explained
whether by excitation or by counter irritation or
what is more probable by their revolutionary effect



on the system, their general utility is universally ac-
knowledged and sanctioned by the best practitioners
of the present day. In this respect the latitude of em-
ploying is widely extended and should be administered
in small doses frequently repeated. It will not un-
frequently happen however in account of the insensibility
of the stomach that this practice will not succeed in
producing the desired effects. In such cases it should be
combined with Calomel and Saccharum which says
Dr. Hoffman will rarely fail to meet our anticipations
it is recommended in various forms as a valuable adju-
vant to promote the operation of the medicine. It is
not used to good effect which of its remedies in the dis-
ease undoubtedly exhibits its highest rank and is deserv-
ing of the greatest consideration, & still deserving Dr. Rush
avows, however, that unless given in small quantities
it is not only never beneficial, and Dr. Rush
restricts the practice of using it to those cases in which
the arterial action is much exalted; & in Dr. Hoffman's



yet many others have unlimited confidence in the
usage, and rely on it almost totally for the cure of the
disease. It is to be greatly necessary to be aware we must
be governed either by the risk and usually the talent
and the objects introduced. The popular use in recent
of its readiness to the disease and is sometimes selected
as the operation and when it causes reaction it must be
understood to be postponed; the injury seldom returns in
order to induce to induce syncope which is a desirable ef-
fect and it should be repeated until decided signs are
produced. The age of the patient should not be taken as a
concerning guide to action. It is said that children bear
hemorrhage better than adults. In aid of the remedies
already mentioned the warm bath is highly recommen-
ded, there are however not wanting others who enter
in a different opinion and will consider it at best
an equivocal and dangerous remedy. It is a very pop-
ular remedy and when properly managed there can
be little doubt of its utility. It is proper attention to the



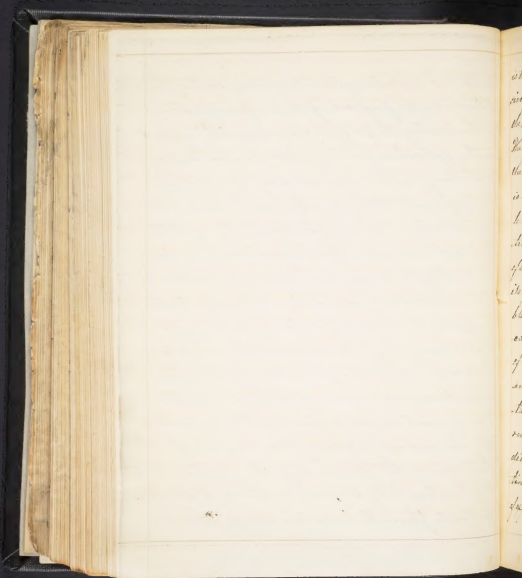
state of the puerperia is not less singular, as it frequently
occurs in a state of seclusion: Dr. Ross, I was, even
taught to possess a specific power independent of its ac-
tual cause. Numerous gynecological & puerperal sever-
alities of this class have been employed of those the
dissection among or have sprung directly with the dis-
eased place. The antispasmodics in puerperal cases have
already been recommended, they are serviceable aids in
promoting the process, the salts and gun ammoniac
have been mentioned, but they seem to be of the irrita-
ting & character have been used in this class, in the
case. A tincture has been administered with success in
alleviating the cramp, but great caution is necessary in its
employment. We come now to a class of remedies, mean-
ing the antispasmodics, whose employment is restricted ex-
clusively to the spasmodic form of the disease. Dr.
Miller takes great confidence in the sparganella which
is administered in 40 drops to a child or exhibition mouth
& Chapman has also mentioned this principle.



bloodletting, for the relief both of the spasms and inflammation. The above are considered the principal general remedies deserving of notice. The local means now to be mentioned constitute an essential part of the treatment. In cases arising in eyes or ears, having some venous origin, is recommended: the former should be applied to the sides of the neck, the latter to the external canals, after due evacuations & distal to the neck will be highly serviceable. A topical means of promoting resolution such as unguentum, warm water or vinegar and water are sometimes productive of happy effects. With regard to the treatment of the third stage of convulsions little need be said, for unfortunately little can be done. The indications are first to get rid of the membrane or morbid matter obstructing respiration, and secondly to moderate the inflammation with a view to preventing its formation & more, and to support the sinking strength of the patient. To facilitate the discharge of the membrane two remedies have been resorted to



emetics and Tracheotomy. As to the choice of emetics, the
antimonials are preferred by the European physicians
in this country the ipecacuanha is usually employed
in strong decoction and large doses. As a last resource
Tracheotomy has been recommended and practised, but
unhappily with little success; perhaps one reason, of its
frequent failure, is its being deferred until there is little to
be expected from an operation. Performed with the view
of extracting the membrane it has rarely succeeded and
is now condemned by most writers on the subject: When
the object is to prevent suffocation from spasmodic
contraction of the glottis there are better grounds to hope
for success. Concerning the treatment of catarrhus
suffocans and congestion of the lungs (before alluded
to as a frequent consequence of croup) will be my conclu-
ding remarks on this disease. It is not requisite that I
should give in this place the diagnostic symptoms as
they have been fully detailed in another and more ap-
propriate place. The indication now in either case



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is to relieve the oppressed lungs, and to establish an equal
circulation. The best means of accomplishing it is to place
the child in a warm bath, and whilst there to vomit freely.
The sulphate of zinc has been warmly recommended, though
the last taste of antimony with calomel and opoeacuanha
is decidedly to be preferred. The juice of garlic also is said
to be deserving of attention. In the congestive stage venese-
ction is cautiously to be employed, owing to a peculiar state
of the lungs in this disease which almost deters us from
its employment. When the lancet is forbidden topical
bleeding may be substituted with advantage. The vesi-
cating applications are not to be neglected in this form
of the disease. A blister should be applied over the breast
and in very urgent cases, it is proposed as a more cer-
tain and decisive means of producing it, to apply cloths
run out of hot water, or pledgets of lint dipped in a
decoction of cantharides made with the spirit of turpen-
tine. The subsequent treatment, consists principally in the use
of expectorants, such as have been already mentioned.

